

Remarks

Claims 1-11, 15, 17-28 and 30-40 are currently pending in the Application.

Telephone conference

Applicant thanks the Examiner for the many courtesies extended during the telephone conference held on June 15, 2006.

Allowable Claims

Applicant acknowledges with gratitude the Examiner's indication of allowability as to Claims 15, 17-28 and 30-40.

Rejection of Claims 1-11 on obviousness-type double patenting grounds

The Office Action asserts a rejection of Claims 1-11 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 of co-pending U.S. Patent Application No. 10/436,753 in view Allison (U.S. Patent No. 6,741,207).

Applicant notes that in accordance with MPEP 804.(I)(B), a provisional double patenting rejection is only a warning and although *"the merits of [a] provisional [double patenting] rejection can be addressed by both the applicant and the examiner without waiting for the first patent to issue"* addressing such issue at this stage is not required. Therefore Applicant respectfully requests the Examiner to postpone such provisional rejection and convert such provisional rejection into a non-provisional one in one of the two applications as soon as the other goes to grant. Withdrawal of this rejection is therefore respectfully solicited.

35 U.S.C. §103(a) Rejection

Claims 1-6 and 10 stand rejected under 35 U.S.C. §103(a) as being obvious in view of McGrath (U.S. Patent No. 6,642,889) and further in view of Allison (U.S. Patent No. 6,741,207).

Applicant submits that the Examiner has **not** established a *prima facie* case of obviousness for the claims rejected under 35 U.S.C. §103(a). Applicant notes:

"To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. **Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.** The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure" (emphases added) *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Applicant submits that a *prima facie* case of obviousness has not been established because the Examiner has failed to show that McGrath and Allison teach each and every element as claimed in the present application. In particular:

Claim 1

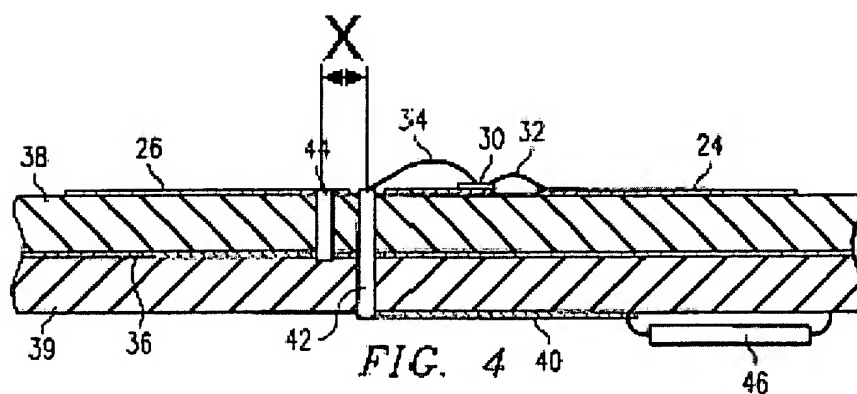
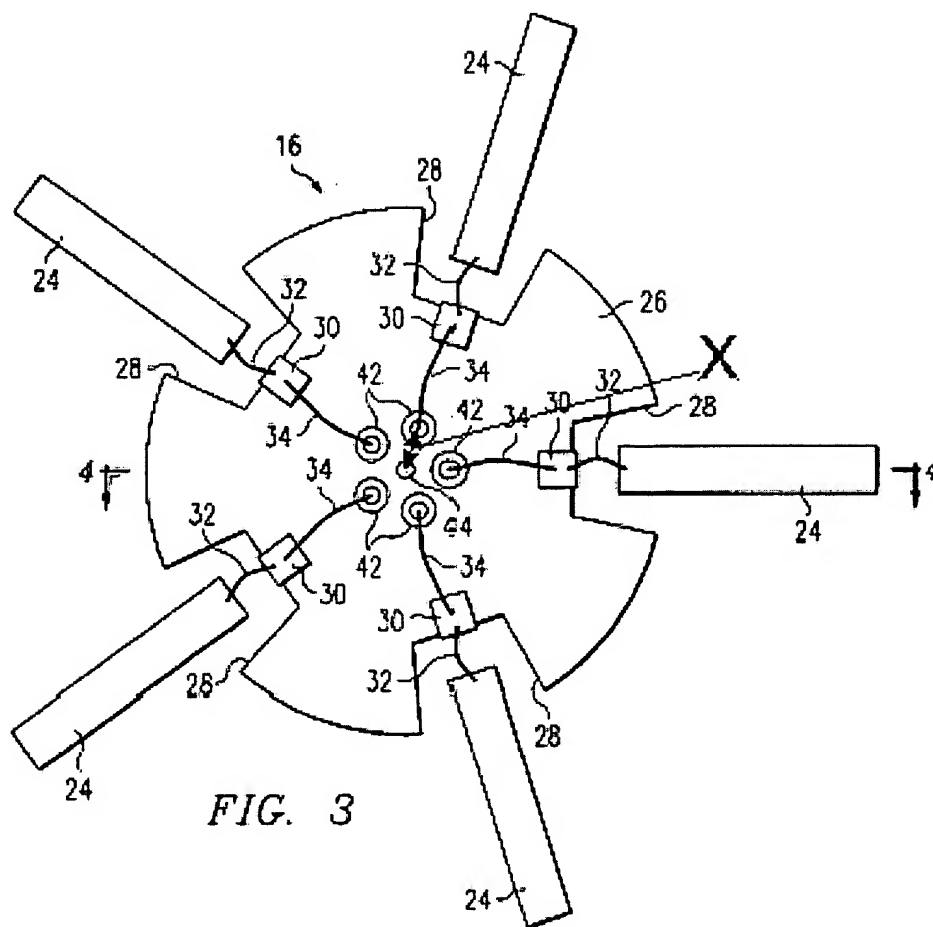
A. Applicant submits that the Examiner has not shown that McGrath and Allison disclose, suggest or teach, *inter alia*, the following features recited by Claim 1 of the present application:

"each MEMS switch being disposed on a common imaginary circle centered on said axis, ... a conductive via in said substrate arranged ... **on** said axis" (emphasis added)

The Examiner asserts that "said axis" as recited in Claim 1 is disclosed by McGrath's via "44." See page 3, last paragraph of the Official Action. The Examiner also asserts that the "conductive via" as recited in Claim 1 is disclosed by McGrath's via "42." See page 3, last paragraph of the Official Action. Applicant respectfully traverses the Examiner's assertion.

According to McGrath's Figures 3 and 4 reproduced below, vias "42" and "44"

are separated by distance "X" added to the drawings.



Because vias "42" and "44" are separated by distance "X," how can McGrath teach,

disclose, or suggest “a conductive via in said substrate arranged ... **on** said axis” (emphasis added) as recited in Claim 1? According to the Merriam-Webster Dictionary, the term “on” is defined as “in contact with” and “touching the surface of.” See the definition of the term “on” from Merriam-Webster Dictionary enclosed herein. Because McGrath’s vias “42” and “44” are separated by distance “X,” McGrath does not disclose “a conductive via in said substrate arranged ... on said axis” as recited in Claim 1. Hence, Claim 1 is patentable over McGrath and should be allowed by the Examiner. Claims 2-6 and 10, at least based on their dependency on Claim 1, are also believed to be patentable over McGrath.

B. Applicant submits that the Examiner has not shown that McGrath and Allison disclose, suggest or teach, *inter alia*, the following features recited by Claim 1 of the present application:

“each MEMS switch being disposed on a common imaginary circle centered on said axis ... the circle having a diameter which is smaller than **one half wavelength** for all frequencies in a passband of said broadband switch” (emphasis added)

Referring to McGrath’s Figure 5 reproduced below, the Examiner asserts that the “common imaginary circle” as recited in Claim 1 is defined by McGrath’s radius “ r_s .” See page 3, last paragraph of the Official Action. According to the Examiner, because McGrath’s stub length “ L_s ” is $\lambda/4$ the diameter of the circle defined by McGrath’s radius “ r_s ” is less than $\lambda/2$. See page 3, last paragraph of the Official Action. Applicant respectfully traverses the Examiner’s assertion.

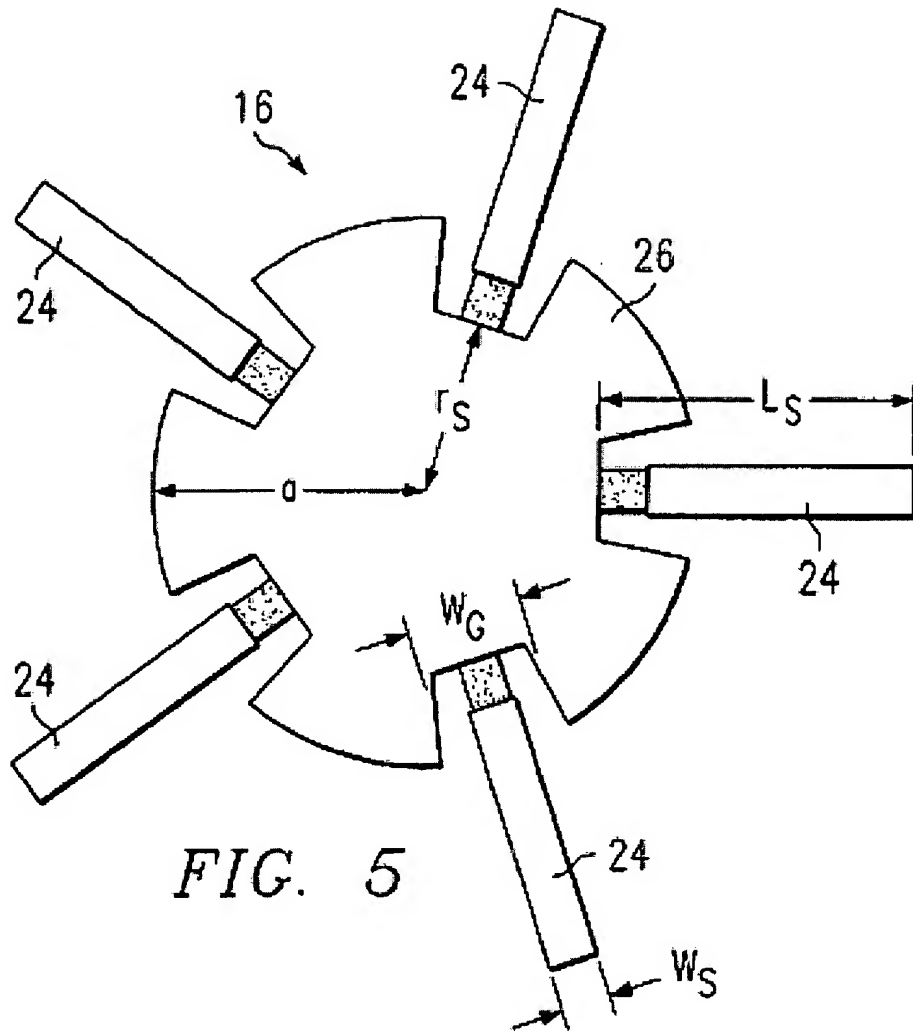


FIG. 5

Applicant is not sure how the Examiner arrived at the conclusion that the diameter of the circle defined by McGrath's radius " r_s " is less than $\lambda/2$ just because McGrath's stub length " L_s " is $\lambda/4$. Is the Examiner's conclusion based on the dimensions of McGrath's Figure 5? In reviewing McGrath, Applicant was unable to find any support for the Examiner's conclusion that McGrath's Figure 5 is to scale. On the contrary, according to McGrath, notch " $28(a-r_s)$ " is chosen such that the input impedance of the radiating element "26" at the radius " r_s " is equal to the characteristic impedance of the microstrip stub "24." Wherein, for a characteristic impedance of 50 Ohms and 100 Ohms, " r_s " is approximately $a/3$ and $a/2$, respectively. See column 6, lines 30-34 of McGrath.

Because McGrath does not teach that the diameter of the circle defined by McGrath's radius " r_s " is less than $\lambda/2$ when McGrath's stub length " L_s " is $\lambda/4$, McGrath does not disclose "the circle having a diameter which is smaller than **one half wavelength**" (emphasis added) as recited in Claim 1.

If the Examiner does not agree with Applicant's interpretation of McGrath, Applicant respectfully request that the Examiner comply with 37 C.F.R. §1.104(c)(2) by designating "as nearly as practicable" where McGrath discloses that the diameter of the circle defined by McGrath's radius " r_s " is less than $\lambda/2$ when McGrath's stub length " L_s " is $\lambda/4$.

Conclusion

In view of the above, reconsideration and allowance of all the claims are respectfully solicited.

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account no. 12-0415. In particular, if this response is not timely filed, then the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136 (a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 12-0415.

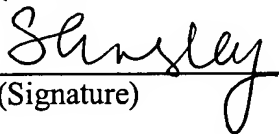
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July 19, 2006

(Date of Deposit)

Shannon Tinsley

(Name of Person Signing)



(Signature)

July 19, 2006

(Date)

Respectfully submitted,



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